

# Virology

Volume 139

1984

## EDITORS

W. K. Joklik, EDITOR-IN-CHIEF      G. E. Bruening      P. W. Choppin      R. Haselkorn  
D. W. Kingsbury      A. J. Levine      F. Rapp      M. D. Summers      P. K. Vogt

## ASSOCIATE EDITORS

S. Adhya	J. M. Dalrymple	W. S. Hayward	R. B. Luftig	G. F. Rohrmann	V. Stollar
C. Baglioni	J. M. DeMarchi	K. V. Holmes	I. G. Miller, Jr.	B. Roizman	B. Sugden
A. K. Banerjee	E. Ehrenfeld	M. S. Horwitz	L. K. Miller	J. A. Rose	M. M. Susskind
C. Basilio	F. A. Eiserling	M. M. Howe	R. C. Miller, Jr.	L. B. Rothman-Denes	R. H. Symons
K. L. Beemon	M. K. Estes	R. Hull	P. Model	J. Sambrook	P. Tattersall
T. Ben-Porat	A. J. Faras	T. Hunter	T. J. Morris	C. E. Samuel	P. Tegtmeyer
K. I. Berns	P. Faulkner	A. O. Jackson	B. Moss	P. A. Schaffer	D. A. Thorley-Lawson
D. H. L. Bishop	B. N. Fields	J. E. Johnson	S. A. Moyer	A. Scheid	D. W. Trent
J. M. Bishop	S. J. Flint	J. M. Kaper	F. A. Murphy	M. J. Schlesinger	H. E. Varmus
L. W. Black	W. R. Folk	J. D. Keene	P. E. Neiman	I. R. Schneider	I. M. Verma
M. A. Bratt	R. I. B. Francki	R. M. Krug	J. R. Neivins	E. M. Scolnick	E. K. Wagner
T. R. Broker	E. P. Geiduschek	M. Lai	J. F. Obieski	J. R. Scott	E. Wimmer
J. S. Brugge	W. Gerhard	R. A. Lamb	D. J. O'Callaghan	P. B. Sehgal	O. Witte
B. J. Carter	R. F. Gesteland	R. A. Lazzarini	P. Palese	P. A. Sharp	J. Youngner
J. M. Coffin	R. M. Goodman	A. D. Levinson	E. Paoletti	J. G. Shaw	M. Zaitlin
J. S. Colter	A. Granoff	L. Levintow	C. C. Payne	T. Shenk	N. D. Zinder
R. J. Courtney	D. E. Griffin	D. M. Livingston	H. J. Raskas	P. G. Spear	
S. Dales	G. Hager	H. F. Lodish	H. D. Robertson		



ACADEMIC PRESS, INC.

(Harcourt Brace Jovanovich, Publishers)

San Diego Orlando New York London

Toronto Montreal Sydney Tokyo

Copyright © 1984 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U. S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1984 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0042-6822/84 \$3.00

MADE IN THE UNITED STATES OF AMERICA

## Contents of Volume 139

NUMBER 1, NOVEMBER 1984

JEFF SAMPLE, AKIKO TANAKA, GERALD LANCZ, AND MEIHAN NONOYAMA. Identification of Epstein-Barr Virus Genes Expressed during the Early Phase of Virus Replication and during Lymphocyte Immortalization	1
KNUT J. HELLER. Identification of the Phage Gene for Host Receptor Specificity by Analyzing Hybrid Phages of T5 and BF23	11
J. C. CARRINGTON AND T. J. MORRIS. Complementary DNA Cloning and Analysis of Carnation Mottle Virus RNA	22
K. L. DESHPANDE AND A. PORTNER. Structural and Functional Analysis of Sendai Virus Nucleocapsid Protein NP with Monoclonal Antibodies	32
VIVIEN MAUTNER AND NANCY MACKAY. Recombination in Adenovirus: Analysis of Crossover Sites in Intertypic Overlap Recombinants	43
ROGER H. MILLER, CAM-TU TRAN, AND WILLIAM S. ROBINSON. Hepatitis B Virus Particles of Plasma and Liver Contain Viral DNA-RNA Hybrid Molecules	53
ROGER H. MILLER, PATRICIA L. MARION, AND WILLIAM S. ROBINSON. Hepatitis B Viral DNA-RNA Hybrid Molecules in Particles from Infected Liver Are Converted to Viral DNA Molecules during an Endogenous DNA Polymerase Reaction	64
LENORE PEREIRA, MARJORIE HOFFMAN, MARICE TATSUNO, AND DALE DONDERO. Polymorphism of Human Cytomegalovirus Glycoproteins Characterized by Monoclonal Antibodies	73
HUBERT E. BLUM, ASHLEY T. HAASE, JEFFREY D. HARRIS, DAVID WALKER, AND GIRISH N. VYAS. Asymmetric Replication of Hepatitis B Virus DNA in Human Liver: Demonstration of Cytoplasmic Minus-Strand DNA by Blot Analyses and <i>in Situ</i> Hybridization	87
LORNE ERDILE AND ROSS B. INMAN. The Role of Gene O Protein in the Replication of Bacteriophage $\lambda$	97
DANIEL KALDERON AND ALAN E. SMITH. <i>In Vitro</i> Mutagenesis of a Putative DNA Binding Domain of SV40 Large-T	109
SHINJI MAKINO, FUMIHIRO TAGUCHI, NORIO HIRANO, AND KOSAKU FUJIWARA. Analysis of Genomic and Intracellular Viral RNAs of Small Plaque Mutants of Mouse Hepatitis Virus, JHM Strain	138
MICHAEL E. VAYDA, KAHAN LEONG, AND S. J. FLINT. Transcription of Adenovirus Cores <i>in Vitro</i>	152
DONNA M. CRECELIUS, CARL M. DEOM, AND IRENE T. SCHULZE. Biological Properties of a Hemagglutinin Mutant of Influenza Virus Selected by Host Cells	164
MICHAEL W. SHAW AND PURNELL W. CHOPPIN. Studies on the Synthesis of the Influenza B Virus NB Glycoprotein	178
<b>SHORT COMMUNICATIONS</b>	
JOHN KUZIO AND PETER FAULKNER. Regions of Repeated DNA in the Genome of <i>Choristoneura fumiferana</i> Nuclear Polyhedrosis Virus	185
ARIE ROSNER AND MOSHE BAR-JOSEPH. Diversity of Citrus Tristeza Virus Strains Indicated by Hybridization with Cloned cDNA Sequences	189
KATSUHISA NAKAJIMA, ERI NOBUSAWA, AND SETSUOKO NAKAJIMA. Genetic Relatedness between A/Swine/Iowa/15/30(H1N1) and Human Influenza Viruses	194
LINDA A. GUARINO, AMIT GHOSH, BIMALENDU DASMAHAPATRA, RANJIT DASGUPTA, AND PAUL KAESBERG. Sequence of the Black Beetle Virus Subgenomic RNA and Its Location in the Viral Genome	199

NUMBER 2, DECEMBER 1984

TAMAR BEN-PORAT, RUTH ANN VEECH, MAYME L. BLANKENSHIP, AND ALBERT S. KAPLAN. Differential Association with Cellular Substructures of Pseudorabies Virus DNA during Early and Late Phases of Replication	205
C. J. GABRIEL AND G. A. DE ZOETEN. The <i>in Vitro</i> Translation of Pea Enation Mosaic Virus RNA	223
S. JOSHI, L. NEELEMAN, C. W. A. PLEIJ, A. L. HAENNI, F. CHAPEVILLE, L. BOSCH, AND L. VAN VLOETEN-DOTING. Nonstructural Alfalfa Mosaic Virus RNA-Coded Proteins Present in Tobacco Leaf Tissue	231
HIDEO SHIMURA AND GENKI KIMURA. Decline in Infectivity of Simian Virus 40 by Sodium Deoxycholate and Its Restoration with the Extract of Monkey Kidney Cells	243
KAZUSHIGE HAMADA, HISAO FUJISAWA, AND TEIICHI MINAGAWA. Purification and Properties of Gene 18 Product of Bacteriophage T3	251
THOMAS ELLIOTT, GEORGE A. KASSAVETIS, AND E. PETER GEIDUSCHEK. The Complex Pattern of Transcription in the Segment of the Bacteriophage T4 Genome Containing Three of the Head Protein Genes	260

GEORGE A. KASSAVETIS, THOMAS ELLIOTT, AND E. PETER GEIDUSCHEK. Regulation of Transcription in the Segment of the Bacteriophage T4 Genome Containing Three of the Head Protein Genes: Plasmid-Specific and Phage Chromosome-Specific Effects	288
LOY E. VOLKMAN AND PHYLLIS A. GOLDSMITH. Budded <i>Autographa californica</i> NPV 64K Protein: Further Biochemical Analysis and Effects of Postimmunoprecipitation Sample Preparation Conditions	299
YOSHIHIRO KAWAOKA, CLAYTON W. NAEVE, AND ROBERT G. WEBSTER. Is Virulence of H5N2 Influenza Viruses in Chickens Associated with Loss of Carbohydrate from the Hemagglutinin?	303
H. J. M. LINTHORST AND J. M. KAPER. Replication of Peanut Stunt Virus and Its Associated RNA 5 in Cowpea Protoplasts	311
M. NUNN, H. WEIHER, P. BULLOCK, AND P. DUESBERG. Avian Erythroblastosis Virus E26: Nucleotide Sequence of the Tripartite <i>onc</i> Gene and of the LTR, and Analysis of the Cellular Prototype of the Viral <i>ets</i> Sequence	330
S. F. JOSEPHS, F. WONG-STAALE, V. MANZARI, R. C. GALLO, J. G. SODROSKI, M. D. TRUS, D. PERKINS, R. PATARCA, AND W. A. HASELTINE. Long Terminal Repeat Structure of an American Isolate of Type I Human T-Cell Leukemia Virus	340
INGER HELENE MADSHUS, SJUR OLSNES, AND KIRSTEN SANDVIG. Different pH Requirements for Entry of the Two Picornaviruses, Human Rhinovirus 2 and Murine Encephalomyocarditis Virus	346
ANTOINE GARBARG-CHENON, FERNAND BRICOUT, AND JEAN-CLAUDE NICOLAS. Study of Genetic Reassortment between Two Human Rotaviruses	358
GARY E. GALICK, RICHARD HAMELIN, STEVEN MAXWELL, DEBORAH DUYKA, AND RALPH B. ARLINGHAUS. The <i>gag-mos</i> Hybrid Protein of ts110 Moloney Murine Sarcoma Virus: Variation of Gene Expression with Temperature	366
JOHN STANLEY, ROBERT HANAU, AND A. O. JACKSON. Sequence Comparison of the 3' Ends of a Subgenomic RNA and the Genomic RNAs of Barley Stripe Mosaic Virus	375
D. L. HOVANEC AND G. M. AIR. Antigenic Structure of the Hemagglutinin of Influenza Virus B/Hong Kong/8/73 as Determined from Gene Sequence Analysis of Variants Selected with Monoclonal Antibodies	384
HENRI AGUT, CHRISTINE BELLOCQ, SYLVIE VAN DER WERF, AND MARC GIRARD. Recombination and Rescue between Temperature-Sensitive Mutants of Poliovirus Type 1	393
SHORT COMMUNICATIONS	
CHRISTINE BELLOCQ, HENRI AGUT, SYLVIE VAN DER WERF, AND MARC GIRARD. Biochemical Characterization of Poliovirus Type 1 Temperature-Sensitive Mutants	403
E. A. BUCKMASTER, U. GOMPELS, AND A. MINSON. Characterisation and Physical Mapping of an HSV-1 Glycoprotein of Approximately $115 \times 10^3$ Molecular Weight	408
J. KUZIO, D. Z. ROHEL, C. J. CURRY, A. KREBS, E. B. CARSTENS, AND P. FAULKNER. Nucleotide Sequence of the p10 Polypeptide Gene of <i>Autographa californica</i> Nuclear Polyhedrosis Virus	414
AUTHOR INDEX FOR VOLUME 139	
CUMULATIVE AUTHOR INDEX FOR VOLUMES 132-139	419
CUMULATIVE SUBJECT INDEX FOR VOLUMES 132-139	420
	428